CLAIMS

What is claimed is:

1. A wireless communication system having a Node B and a plurality of wireless transmit/receive units (WTRUs), the system comprising:

a contention-based uplink (UL) channel for supporting UL transmissions from the WTRUs to the Node B; said UL channel being randomly accessed by a WTRU when the WTRU is ready to transmit data; and

at least one downlink (DL) physical channel for supporting DL transmissions from the Node B to the WTRUs, said DL transmissions including an acquisition indicator and information regarding said acquisition indicator; whereby said acquisition indicator confirms whether the data transmitted over said UL channel was successfully received by the Node B.

2. The system of claim 1 wherein said information regarding said acquisition indicator includes the timeslot occupied by said acquisition indicator.

3. The system of claim 1 wherein said information regarding said acquisition indicator includes the code used to transmit said acquisition indicator.

4. The system of claim 1 wherein said UL channel further includes at least two codes for transmission, and said acquisition indicator separately confirms for each code whether the data transmitted over said UL channel was successfully received by the Node B.

5. The system of claim 4 wherein further including at least one acquisition indicator for each code.

6. The system of claim 5 wherein said information regarding said acquisition indicator includes a mapping between each said code and the corresponding acquisition indicator.

7. The system of claim 1 wherein said information regarding said acquisition indicator is transmitted in the broadcast channel of a Time Division Duplex system.

8. The system of claim 1 wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system.

9. The system of claim 1 wherein said acquisition indicator is transmitted in the broadcast channel of a Time Division Duplex system.

10. The system of claim 1 wherein said acquisition indicator is transmitted in a paging indicator channel of a Time Division Duplex system.

11. A method for fast acknowledgment of transmissions in a wireless communication system having a Node B and a plurality of wireless transmit/receive units (WTRUs); the method comprising:

providing a contention-based uplink (UL) channel for supporting UL transmissions from the WTRUs to the Node B; said UL channel being

accessing said UL channel by a WTRU when the WTRU is ready to transmit data;

providing at least one downlink (DL) physical channel for supporting DL transmissions from the Node B to the WTRUs; and

including within said DL transmissions an acquisition indicator and information regarding said acquisition indicator; whereby said acquisition indicator confirms whether the data transmitted over said UL channel was successfully received by the Node B.

12. The method of claim 11 wherein said information regarding said acquisition indicator includes the timeslot occupied by said acquisition indicator.

13. The method of claim 11 wherein said information regarding said acquisition indicator includes the code used to transmit said acquisition indicator.

14. The method of claim 11 wherein said UL channel further includes at least two codes for transmission, and said acquisition indicator separately confirms for each code whether the data transmitted over said UL channel was successfully received by the Node B.

15. The method of claim 14 wherein further including at least one acquisition indicator for each code.

16. The method of claim 15 wherein said information regarding said acquisition indicator includes a mapping between each said code and the corresponding acquisition indicator.

17. The method of claim 11 wherein said information regarding said acquisition indicator is transmitted in the broadcast channel of a Time Division Duplex system.

18. The method of claim 11 wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system.

19. The method of claim 11 wherein said acquisition indicator is transmitted in the broadcast channel of a Time Division Duplex system.

20. The method of claim 11 wherein said acquisition indicator is transmitted in a paging indicator channel of a Time Division Duplex system.